Connecting Math, Science, and Technology in One Activity


Scientific Inquiry


Critical Thinking

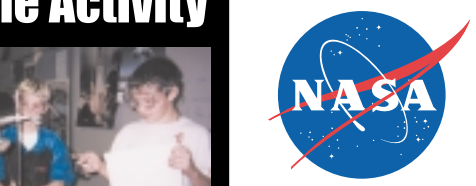
Systematic Observation


Analyzing Data

Identifying Variables

Engineering Design Process

Discovery Method



National Aeronautics and Space Administration

Office of Aerospace Technology

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ETO
Earth To Orbit

Engineering Design Challenges

http://eto.nasa.gov

NSIP

NASA Student Involvement Program

http://nsip.net

Pub 8-1267

National Aeronautics and Space Administration

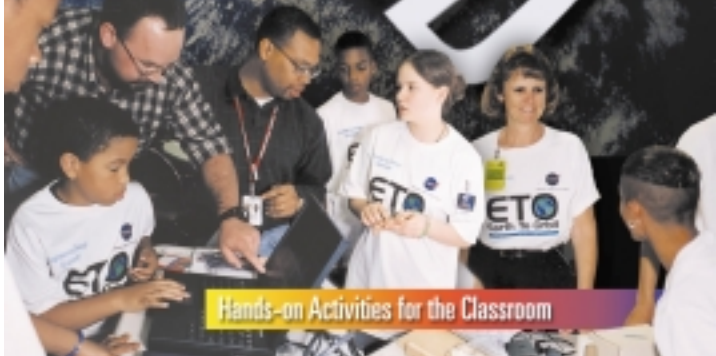
Educational Product	
Students	Grades 6–9

EP-2001-02-30-MSFC

Earth to Orbit

Engineering Design Challenges

AND BEYOND



Hands-on Activities for the Classroom

Purpose

The NASA Earth to Orbit Engineering Design Challenges connect students with the challenges of NASA engineers as they design the next generation of aerospace vehicles. With simple and inexpensive materials, students engage in related design challenges in their classrooms by designing, building, and testing models that meet specified criteria.

Develops

- Use of scientific method
- Discovery method learning
- Team work
- Creativity and problem solving skills
- Presentation and communication skills
- Integration of science, math, and technology.

Materials Available on the World Wide Web

- Design challenges include the complete background information, activity, design sheet, assessment, and transparency masters
- Video
- Related links for investigation
- Alternate lesson plans
- PowerPoint presentation
- Games and puzzles
- Teacher feedback
- Vendors for prepacked kits containing the materials
- Competition for NASA Student Involvement Program.